



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/712,380	11/13/2000	Jonathan Lenchner	Y0R920000621US1	8649
7590	04/13/2004		EXAMINER	
Kevin M Mason RYAN MASON & LEWIS LLP 1300 Post Road Suite 205 Fairfield, CT 06430			DASS, HARISH T	
			ART UNIT	PAPER NUMBER
			3628	

DATE MAILED: 04/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**BEST AVAILABLE COPY**

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/712,380	JONATHAN LENCHNER	
	<b>Examiner</b>	<b>Art Unit</b>	
	Harish T Dass	3628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 14 November 2000.

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-23 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-23 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_ .

5)  Notice of Informal Patent Application (PTO-152)

6)  Other: \_\_\_\_\_

## DETAILED ACTION

### ***Specification***

1. The abstract of the disclosure is objected to because Abstract line 9, p should be C (C is an integer and p is probability – see rejection of 35 USC § 112). Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 12-15, and 21-22 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are:

a). Claim 12, line 3 reads “a fraction cost, p, equal to C/100” and specification page 3 line 24-25 reads “fraction cost between 0 and .99” and “a probability, p, equal to C/100” and page 4 line 8-10 “C is an integer between 0 and 9 indicating the fractional cost between 0 and .99”. This discrepancy should be corrected and claim 12 line 3 should either read “... a probability, p, equal ...” or “... a fraction cost, C, equals ...” and further N.C should be defined in claim clearly. Please, amend the claim and clearly define the proper language and terms.

***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-5 & 7-17 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As an initial matter, the United States Constitution under Art. I, §8, cl. 8 gave Congress the power to "[p]romote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries". In carrying out this power, Congress authorized under 35 U.S.C. §101 a grant of a patent to "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition or matter, or any new and useful improvement thereof." Therefore, a fundamental premise is that a patent is a statutorily created vehicle for Congress to confer an exclusive right to the inventors for "inventions" that promote the progress of "science and the useful arts". The phrase "technological arts" has been created and used by the courts to offer another view of the term "useful arts". See *In re Musgrave*, 167 USPQ (BNA) 280 (CCPA 1970). Hence, the first test of whether an invention is eligible for a patent is to determine if the invention is within the "technological arts".

Further, despite the express language of §101, several judicially created exceptions have been established to exclude certain subject matter as being patentable subject matter covered by §101. These exceptions include "laws of nature", "natural phenomena", and "abstract ideas". See *Diamond v. Diehr*, 450, U.S. 175, 185, 209

USPQ (BNA) 1, 7 (1981). However, courts have found that even if an invention incorporates abstract ideas, such as mathematical algorithms, the invention may nevertheless be statutory subject matter if the invention as a whole produces a "useful, concrete and tangible result." See *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* 149 F.3d 1368, 1973, 47 USPQ2d (BNA) 1596 (Fed. Cir. 1998).

This "two prong" test was evident when the Court of Customs and Patent Appeals (CCPA) decided an appeal from the Board of Patent Appeals and Interferences (BPAI). See *In re Toma*, 197 USPQ (BNA) 852 (CCPA 1978). In *Toma*, the court held that the recited mathematical algorithm did not render the claim as a whole non-statutory using the Freeman-Walter-Abele test as applied to *Gottschalk v. Benson*, 409 U.S. 63, 175 USPQ (BNA) 673 (1972). Additionally, the court decided separately on the issue of the "technological arts". The court developed a "technological arts" analysis:

The "technological" or "useful" arts inquiry must focus on whether the claimed subject matter...is statutory, not on whether the product of the claimed subject matter...is statutory, not on whether the prior art which the claimed subject matter purports to replace...is statutory, and not on whether the claimed subject matter is presently perceived to be an improvement over the prior art, e.g., whether it "enhances" the operation of a machine. *In re Toma* at 857.

In *Toma*, the claimed invention was a computer program for translating a source human language (e.g., Russian) into a target human language (e.g., English). The court found that the claimed computer implemented process was within the

"technological art" because the claimed invention was an operation being performed by a computer within a computer.

The decision in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* never addressed this prong of the test. In *State Street Bank & Trust Co.*, the court found that the "mathematical exception" using the Freeman-Walter-Abele test has little, if any, application to determining the presence of statutory subject matter but rather, statutory subject matter should be based on whether the operation produces a "useful, concrete and tangible result". See *State Street Bank & Trust Co.* at 1374. Furthermore, the court found that there was no "business method exception" since the court decisions that purported to create such exceptions were based on novelty or lack of enablement issues and not on statutory grounds. Therefore, the court held that "[w]hether the patent's claims are too broad to be patentable is not to be judged under §101, but rather under §§102, 103 and 112." See *State Street Bank & Trust Co.* at 1377. Both of these analysis goes towards whether the claimed invention is non-statutory because of the presence of an abstract idea. Indeed, *State Street* abolished the Freeman-Walter-Abele test used in *Toma*. However, *State Street* never addressed the second part of the analysis, i.e., the "technological arts" test established in *Toma* because the invention in *State Street* (i.e., a computerized system for determining the year-end income, expense, and capital gain or loss for the portfolio) was already determined to be within the technological arts under the *Toma* test. This dichotomy has been recently acknowledged by the Board of Patent Appeals and Interferences (BPAI) in affirming a

§101 rejection finding the claimed invention to be non-statutory. See *Ex parte Bowman*, 61 USPQ2d (BNA) 1669 (BdPatApp&Int 2001).

In the present application, Claims 1-5 and 7-17 have no connection to the technological arts. None of the steps indicate any connection to a computer or technology.

Therefore, the claims are directed towards non-statutory subject matter. To overcome this rejection the Examiner recommends that Applicant amend the claims to better clarify which of the steps are being performed within the technological arts; for example: "computer is used to calculate average ..."

#### ***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 18 & 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Adams et al (hereinafter Adams - US 5,274,561).

Re. Claims 18 and 23, Adams discloses a memory (Fig. 2 items 25-26, RAM & EPROM) that stores computer-readable code (EPROMs do store readable codes); and a processor operatively coupled to said memory, said processor configured to implement said computer-readable code [Fig. 2 item 20], said computer-readable code configured to: determine a purchase price for said transaction (determining fare) [Fig. 1; C2 L35-L50], said purchase price including a fractional cost that exceeds a whole-unit amount [C4 L51-L55]; generate a random number (actuation process and generating

DM 23.50, 24.00 & 25.00) [C4 L1-L20]; and round said purchase price up or down to a whole-unit amount based on said random number [C3 L60 to C4 L66].

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams.

Re. Claim 1 Adams et al (US 5,274,561) discloses an apparatus for increasing a fare (amount) to a rounded-off amount and determining a purchase price (taxi-fare) for said transaction, said purchase price including a fractional cost that exceeds a whole-unit amount [see entire document particularly, Abstract; Figures 2, 4-5; C1 L20-L40; C2 L38-L64; C3 L40-L45; C4 L60 to C4 L68]; and rounding said purchase price up or down to a whole-unit amount based on said random number [C4 L51-L55] and appropriate assigned key for fare round-off actuation [C3 L40-L45; C4 L32-L46]. Adams, explicitly, does not disclose generating a random number. However, random generator and generating random number is well known and commonly used in computer calculations, time-stamps, games, etc., and most computer languages have a function for generating these numbers. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the disclosure of Adam and add random

Art Unit: 3628

generator to assign appropriate digit value whose correct acceptance is signified by addition of random number.

Re. Claims 2-5 & 7, Adams substantially, discloses the limitations for the claims; wherein said step of generating a random number is performed by a third party to said transaction and wherein said step of generating a random number is supervised by a third party to said transaction (a third party chauffeur, who manually adjusts the meter randomly to display the fare) [C3 L35 to C4 L46], wherein said step of generating a random number further comprises the step of obtaining a seller-generated increment value (value generated by operator by actuation of key [C4 L1-L20], and wherein said step of generating a random number further comprises the step of obtaining a buyer-provided offset value (passengers tip to driver) [C3 L65-L66]. wherein a buyer commitment to the transaction is obtained by means of currency submitted to a trusted third party prior to the generation of said random number [C1 L10-L41].

Re. Claims 8-11, Adams, explicitly, does not disclose wherein said buyer-provided offset value is specified by the buyer in response to a query, and wherein said buyer-provided offset value is generated from a serial number obtained from paper currency provided by the buyer, and wherein said buyer-provided offset value is generated from a numeric identifier obtained from a product associated with said transaction, and wherein the seller generated random number is made without access to said buyer-provided offset value. However, it is well known that random generator generates number between

0 and 1 and the offset can be any number to provide non-repeating number and this number can be currency serial number, time or other entry.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Adams in view of Walter C. Jones (hereinafter Jones – Collectors picking up the cent Pennies are getting to be in real demand, Florida times, Jacksonville, Aug, 3, 1999).

Re. Claim 6, Adams, explicitly, does not disclose wherein a buyer commitment to the transaction is obtained by means of currency submitted to a vending machine. However, Jones discloses this feature where customer purchase gas (gas pump) and it is well known that at the pump station buyer has to agree with purchase by pushing the button yes/no or selection button to pump the gas he/she wants.

Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams in view of Raymond J. Barber, Jr. (hereinafter Barber “Does Your Accounting Make Cents”, National Association of Cost Accounting, 1947).

Re. Claims 12-14, Adams discloses determining a purchase price (fare), N.C. for said transaction (DM 27.60) [C4 L1-L67], said purchase price including a fractional cost, p [DM 2.40], equal to C/100, that exceeds a whole-unit amount, N; generating a random number. Adams, explicitly, does not disclose rounding said purchase price up to a price of N+ 1 units with a probability of p and down to a price of N units with a probability of (1-

p) and wherein said step of generating a random number is performed in a manner that prevents a bias towards a buyer or seller. However, Barber substantially discloses rounding purchase price to  $N+1$  and  $N$  (nearest dollar). Additionally, probability theories are well-known such as unbiased (point) estimators for the population means and variance, and probability diagram "Venn diagram" if probability or Event  $(N+1) = p$ , than complement event probability "rule of complementation" is  $N=(1-p)$ . It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the disclosure of Adams and include rounding off to nearest number, as taught by Barber, and use basic rule of probability to generate an unbiased random numbers for sample space of  $\{C=1, 2, 3, \dots, 100\}$  to simplify bookkeeping.

Re. Claim 14, Adams discloses the step of obtaining a buyer commitment to the transaction (fare agreed to with the passenger) [C1 L19].

Re. Claims 15-17 and 19-22, the claims are rejected under the same rational as claims 1-14.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harish T Dass whose telephone number is 703-305-4694. The examiner can normally be reached on 8:00 AM to 4:50 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung S Sough can be reached on 703-308-0505. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Harish T Dass  
Examiner  
Art Unit 3628

3/2/04

***Requirement for Information under 37 CFR 1.105***

1. Applicant and the assignee of this application are required under 37 CFR 1.105 to provide the following information that the examiner has determined is reasonably necessary to the examination of this application.
2. The information is required to identify products and/or services embodying the disclosed subject matter of providing bases for determining a purchase price by rounding said purchase price up to a price of  $X$  units with a probability of  $((N + p) / X)$  and down to a price of zero units with a probability of  $1 - ((N + p) / X)$ . Examiner has checked the "Introductory Engineering Statistics" by Irwin Guttman, University of Wisconsin, John Wiley & Sons, Inc. NY, 1965 and was unable to locate the derived formula. Please provide information where this formula is derived from on any other information about concepts used in this application. Further, how do you round off  $(N+p) = 3.5$  &  $X=5$  and  $(N+p) = 2.5$  &  $X=5$ ?
3. The fee and certification requirements of 37 CFR 1.97 are waived for those documents submitted in reply to this requirement. This waiver extends only to those documents within the scope of the requirement under 37 CFR 1.105 that are included in the applicant's first complete communication responding to this requirement. Any supplemental replies subsequent to the first communication responding to this requirement and any information disclosures beyond the scope of this requirement

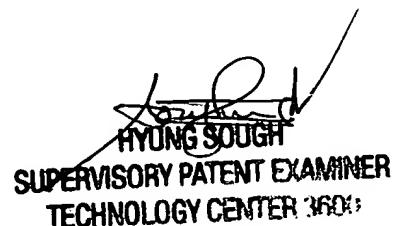
Art Unit: 3628

under 37 CFR 1.105 are subject to the fee and certification requirements of 37 CFR 1.97 where appropriate.

4. In responding to those requirements that require copies of documents, where the document is a bound text or a single article over 50 pages, the requirement may be met by providing copies of those pages that provide the particular subject matter indicated in the requirement, or where such subject matter is not indicated, the subject matter found in applicant's disclosure.

5. The applicant is reminded that the reply to this requirement must be made with candor and good faith under 37 CFR 1.56. Where the applicant does not have or cannot readily obtain an item of required information, a statement that the item is unknown or cannot be readily obtained will be accepted as a complete reply to the requirement for that item.

6. This requirement is subject to the provisions of 37 CFR 1.134, 1.135 and 1.136 and has a shortened statutory period of 2 months. EXTENSIONS OF THIS TIME PERIOD MAY BE GRANTED UNDER 37 CFR 1.136(a).

  
HYUNG SOUGH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3603